Original Article

Family/friend donors are not true voluntary donors

Rohit Jain, Gajendra Gupta

Department of Pathology and Transfusion Medicine, Santokba Durlabhji Memorial Hospital, Jaipur, Rajasthan, India

Abstract:

Background: Family/replacement donors still provide more than 45% of the blood collected in India. National AIDS Control Organization passed the guideline that family/friend donors should be considered as voluntary donors by the blood banks in India. **Materials and Methods:** We did a prospective analysis of Transfusion Transmitted Infections (TTI's) on our family donors for the years 2009 and 2010 to compare the results and evaluate if family donors are as safe as voluntary donors. **Result:** The prevalence of Human Immunodeficiency Virus, Hepatitis B surface antigen, Hepatitis C Virus, and Anti-Treponema Palladium antibody was much higher in family donors in comparison to voluntary donors. **Conclusion:** Family donors cannot be included amongst voluntary-non-remunerated blood donors as they have a higher rate of TTIs.

Key words:

Family donors, National AIDS Control Organization, Transfusion transmitted infections, Voluntary blood donation

Introduction

Family/replacement donors still provide more than 45% of the blood collected in India and are the one who give blood when it is required by a member of his/her family or community. This often involves coercion and/or payment which compromise the safety of the blood.[1] In the recent past National AIDS Control Organization (NACO) passed the guideline that family/friend donors should be considered as voluntary donors by the blood banks in India so as to add to the voluntary donor database and achieving the set goals. We did a prospective analysis of Transfusion Transmitted Infections (TTI's) on our family donors for the years 2009 and 2010 to compare the results and evaluate if family donors are as safe as Voluntary donors.

Materials and Methods

This prospective study started in January 2009 was conducted at Blood Bank, Santokba Durlabhji Memorial Hospital cum Medical Research Institute, Jaipur, India. It is a state-of-the-art regional blood bank with NABH accreditation, processing more than 25,000 units per year. Blood collected from voluntary, family and replacement donors between January 2009 and December 2010 was included in the study. Voluntary donors had donated blood either in the blood bank or in the camps organized by mobile teams mostly in the northern districts of Rajasthan. Replacement donors were unknown/unrelated to the patients and had come to the centre to donate blood to replace that required by patients. Family/friend donors were either relatives or friends of the patients requiring blood transfusion, recruited on a one-time-only basis to donate blood for the patient. Replacement and family donors were segregated based on thorough evaluation of their relation / knowhow about the patient. Donors were carefully screened by trained personnel after a complete physical examination and satisfactorily answering the donor's questionnaire. At the end of blood collection, donor samples were obtained for serological testing.

Enhanced Chemiluminescence Immunoassay (ECi) was used for qualitative detection of HBsAg, anti-HIV (anti-HIV 1 and anti-HIV 2) and anti-HCV in donor serum/plasma on the VITROS 3600 Immunodiagnostic System, Ortho Clinical Diagnostics, U.S.A. based on luminescent reaction. SD bioline syphilis fast 3.0 solid phase immunochromatographic assay was used for the qualitative detection of antibiodies of all isotypes (IgG, IgM, IgA) against Treponema Pallidium (Anti TP). All the data collected were analyzed and prevalence of TTI's calculated.

Results

A total of 54,596 donations were received in our blood bank over the period of 24 months of study of which 97.71% were men and 2.29% were women. A total of 24,944 and 29,652 units were collected in 2009 and 2010, respectively. Of this, 68.2% were voluntary, 18.1% were family, and 13.7% were replacement donors. To our utter surprise the prevalence of HIV, HBsAg, HCV and anti TP was

Access this article online

Website: www.ajts.org

DOI: 10.4103/0973-6247.95047

Quick Response Code:

Correspondence to:
Dr. Rohit Jain,
Department of Pathology and Transfusion Medicine, Santokba Durlabhji Memorial Hospital, Jaipur, Rajasthan, India.
E-mail: funkyaarjay@yahoo.com

Table 1: Prevalence of HBSAG, HCV, HIV and anti TP in Voluntary, Family, and Replacement Donors

	2009			2010		
	Voluntary (*N* = 15931)	Family (*N* = 3514)	Replacement (*N* = 5499)	Voluntary (*N* = 21319)	Family (*N* = 6377)	Replacement (*N* = 1956)
HIV	55 (0.35)	17 (0.48)	22 (0.40)	55 (0.26)	17 (0.27)	48 (0.41)
HBsAg	215 (1.35)	74 (2.11)	101(1.84)	260 (1.22)	114 (1.79)	33 (1.69)
HCV	100 (0.63)	32 (0.91)	44 (0.80)	115 (0.54)	35 (0.55)	9 (0.46)
Anti TP	25 (0.16)	16 (0.46)	42 (0.765)	32 (0.15)	32 (0.50)	9 (0.46)
Total (*n*)	24944			29652		

Figures in parentheses are indicates in percentage

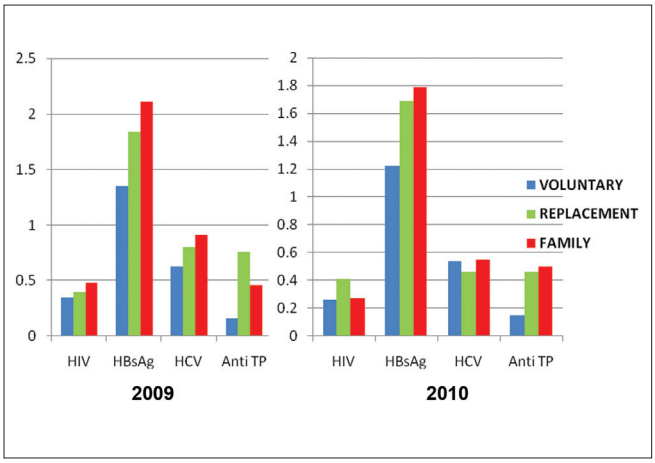

Figure 1: Prevalence of HBSAG, HCV, HIV, and anti TP in voluntary, family, and replacement donors.

much higher in family donors in comparison to voluntary donors and almost equivalent/more to prevalence found in replacement donors [Table 1 and Figure 1].

Discussion

The goal of Voluntary blood donation (VBD) is to wipe off the scarcity of blood and ensure availability of safe and quality blood and other blood components, round the clock and throughout the year. This will lead to alleviation of human sufferings, even to the far-flung remote areas in the country.[1] A move towards a totally voluntary blood donor service for all blood products has long been advocated at the international level. As already indicated, under the directive of the Supreme Court buying blood from blood sellers has been officially banned in India from January 1, 1998. But many transfusion centres or blood banks of the country, in view of banning of buying blood from professional blood seller have switched over to replacement donor system. They put the responsibility of bringing donor for the blood bank on the patient or their friends/relatives instead of going out to motivate and recruit voluntary blood donors. It can result in people coming forward to give blood who had been recruited financially by the patient or his/her family, concealing the fact that they were in reality very much like commercial donors. This has resulted in patronisation of blood seller system where money is not officially paid at the blood bank but unofficially outside the blood bank door by the patients' relatives.

Family blood donors are not considered safe because they donate blood under family peer or circumstantial pressure and may hide their high risk behavior or illnesses.The most serious danger of family donor system is that the difficulties described above may create entrepreneurial opportunities for the blood sellers to pose as family surrogates, on payment in an organised manner. In India, hospitals particularly specialised ones are in the metropolitan cities or in state capitals. Rural people coming to these hospitals cannot bring donors of required group with them. Naturally they fall prey to blood sellers.[2,3]

NACO-issued guidelines to all the blood banks in India to include family donors as voluntary blood donors without evaluating their donor risk potential for TTI's. It is too easy for countries to continue with the system that places the onus of recruitment of blood donors on the patient, who is therefore saddled with a double load of problems, i.e., the disease process and a need to obtain blood donors.[3] Such a system is easy for hospitals but is less safe than a volunteer system, as much data demonstrates that infectious marker rates are nearly always higher in such donors than in true voluntary donors.[4-11] Our study reiterates the fact that family donors should be included amongst replacement donors and not voluntary donors as the prevalence of TTI's among family donors were found to be at par or more than replacement donors but much higher than the voluntary donor group.

The National Blood Policy 2002 is targeted at achieving 100% voluntary non-remunerated blood donation while the government only appreciates VBD in NACO-supported blood banks for refreshment funds which goes against achieving the target by all kinds. Similarly for organizing outdoor blood donation camps, permissions by State Blood Transfusion Councils are not given to blood banks in corporate sector / private hospitals which caters to >15% of blood usage. Thus, making the national target of 100% VBD unachievable.

Targeting "Family Donors" is often seen as a cost-effective way to reach potential repeat donors because once an individual has had the experience of donating blood there should be less resistance to doing it again. On the risk side, there is no reliable way to determine in advance if this is a low-risk group. A family replacement donors strategy must be carefully thought out in order to ensure risk reduction and cost effectiveness. The primary partner agencies in reaching this target group are the public and private health service providers, and the capabilities of these institutions must be taken into consideration.[4] The government, politicians and administrators need to be made aware of the comparative country statistics on blood transfusion that are available, as national pride can encourage action. The need for a national evaluation report of blood transfusion matters by an independent expert can facilitate new developments as transfusion medicine attracts less attention of financial bureaucrats as due to it being relatively small part of our country's budget.[3]

Conclusion

Family donors cannot be included amongst voluntary non-remunerated blood donors as they have a higher rate of TTI's.

References

1. Voluntary Blood Donation Programme - An Operational Guideline [internet]. National AIDS Control Organisation, Ministry of Health and Family Welfare, Government of India, New Delhi, 2007. Available from: http://www.nacoonline.org. [Last accessed on 2011 Feb 15].
2. Commercialization [Internet]. Available from: http://mahasbtc.aarogya.com/index.php/blood-bank. [Last accessed on 2011 Feb 15].
3. Woodfield G. Road blocks in achieving a 100% voluntary blood donation rate in the south Asian region. Asian J Transfus Sci 2007;1:33-8.
4. National Strategy on blood donor mobilization [Internet]. Ministry of Health. Blood Transfusion service (NBTS). Available from: http://www.fhi.org. [Last accessed on 2011 Feb 15].
5. Fernandes H, D'souza PF, D'souza PM. Prevalence of transfusion transmitted infections in voluntary and replacement donors. Indian J Hematol Blood Transfus 2010;26:89-91.
6. Adhikari L, Bhatta D, Tsering DC, Sharma DK, Pal R, Gupta A. Infectious disease markers in blood donors at Central Referral Hospital, Gangtok, Sikkim. Asian J Transfus Sci 2010; 4:41-2.
7. Arora D, Arora B, Khetarpal A. Seroprevalence of HIV, HBV, HCV and syphilis in blood donors in Southern Haryana. Indian J Pathol Microbiol 2010;53:308-9.
8. Kaur G, Basu S, Kaur R, Kaur P, Garg S. Patterns of infections among Blood donors in a tertiary care centre: A retrospective study. Natl Med J India 2010;23:147-9.
9. Bhawani Y, Rao PR, Sudhakar V. Seroprevalence of transfusion transmissible infections among blood donors in a tertiary care hospital of Andhra Pradesh. Biol Med 2010;2:45-8.
10. Singh K, Bhat S, Shastry S. Trend in seroprevalence of Hepatitis B virus infection among blood donors of coastal Karnataka, India. J Infect Dev Ctries 2009;3:376-9.
11. Chandra T, Kumar A, Gupta A. Prevalence of transfusion transmitted infections in blood donors: An Indian experience. Trop Doct 2009;39:152-4.

Cite this article as: Jain R, Gupta G. Family/friend donors are not true voluntary donors. Asian J Transfus Sci 2012;6:29-31.

Source of Support: Nil, **Conflict of Interest:** None declared.